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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/648,815 | 08/26/2003 | William F. Howard | WEAT/0313 | 4562 |
| 36735 | 7590 | 10/24/2006 | EXAMINER | |
| PATTERSON & SHERIDAN, L.L.P. 3040 POST OAK BOULEVARD, SUITE 1500 HOUSTON, TX 77056 | | | SMITH, MATTHEW J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3672 | |

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,815

Applicant(s)

HOWARD ET AL.

Examiner

Matthew J. Smith

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-10, 12-17, 26, 27, 30-38, 40-46 and 48-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40-46 and 50-55 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-14, 17, 26, 27, 30-38 and 48 is/are rejected.
- 7) ☒ Claim(s) 15, 16, and 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claim Objections

Claim 49 is objected to because of the following informalities: a claim cannot depend from itself. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6, 10, 12, 13, 31-33, 35, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Kisman (6039121).

Kisman discloses a wellbore having a height, interface, and second, lower-density fluid spaced from the bottom; cooling zone having saturated liquid and flashing or vaporization at a low pressure region (col. 11, lines 31-39); pump 50 above the cooling zone and in a portion of the well fluids containing gas and liquid (inherent); the cooling zone between the pump and the bottom and having a pressure gradient; the vapor cooling the well fluid; horizontal, footed wellbore; a space between the pump and the wellbore upper surface (Fig. 2); and vaporizing gas rising naturally (Fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9, 14, 17, 26, 27, 30, 34, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisman in view of Stuebinger et al. (6079491).

Kisman discloses the invention substantially as claimed but not a progressing cavity pump having a rubber stator, rod-driven rotor, pressure sensor, controller, or low resistance to temperature-based breakdown.

Stuebinger et al. present an electrical, submersible, progressing cavity pump 22 having a rubber stator (col. 11, line 21) that has a low resistance to temperature-based breakdown (being rubber as opposed to metal), rod-driven rotor 26 (Fig. 4), pressure sensor and controller (col. 9, line 42), and method of use.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the Stuebinger et al. pump, sensor, and controller in the Kisman device in order to handle larger volumes of fluids (Stuebinger et al., col. 5, lines 37-38). To locate the controller at the surface would also have been obvious since the function of the controller would not change regardless of where the controller is located.

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Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Butler (5607016) in view of Kisman.

Butler discloses injecting steam in a first wellbore 26; urging formation fluid toward a second wellbore 32; positioning a pump 42 to pump fluids (Fig. 3A) but not maintaining a pressure in the formation such that the steam enters the second wellbore as water, or providing a cooling zone with a pressure sufficient to vaporize water.

Kisman teaches producing a well by maintaining a pressure in the formation such that the steam enters the second wellbore as water and providing a cooling zone with a pressure sufficient to vaporize water.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to produce a second wellbore with the technique taught by Kisman in order to provide an enhanced lift method (col. 2, line 30).

Allowable Subject Matter

Claims 40-46 and 50-55 are allowed.

Claims 15, 16, and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments, see page 12, filed 25 august 2006, with respect to claim 40 have been fully considered and are persuasive. The 35 U.S.C. 102 rejection of claim 40 has been withdrawn.

Applicant's arguments, also filed 25 August 2006, have been fully considered but are not persuasive. The examiner contends the added limitations to claims 1, 10, 31, and 48 do not overcome the rejection. Since Kisman pump 50 is spaced from the bottom of casing 6, the cooling zone is defined as a space below the pump and above casing 6. Within this space, the density of the fluid will be high at the casing 6 contact point and lower at the casing 19 contact point. Thus, the added limitation of the pump above the cooling zone in fluid having a lower density at the pump (because of the gas still in solution) than at the cooling zone fluid is considered met. Similarly, the definition of fluid in claim 10 is also met (there is usually some gas with the liquid). With regards to claim 31, apparatus claims need a structural limitation when accompanying a claimed function. Stating the pump "is operated to maintain pressure" is not considered a structural limitation since the Kisman pump is capable of maintaining the pressure "sufficient to vaporize" the steam. Claim 50 is a method claim and the "sufficient to vaporize" limitation is pertinent with respect to patentability.

The discussion of Butler is not convincing. Butler discloses a pump and Butler's recovery of hydrocarbons would not have been prevented or significantly altered with providing a cooling zone with a pressure to vaporize water. Thus, incorporating the teachings of Kisman would enhance the hydrocarbon recovery.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Engle (3485300) shows a pump in a cooling zone.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 571-272-7034. The examiner can normally be reached on T-F, 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David Bagnell
Supervisory Patent Examiner
Art Unit 3672

MJS *MJS*

11 October 2006